



FEMA

FEMA Helped Local Officials with Home Inspections and Technical Assistance

Full Mitigation Best Practice Story

Galveston County, Texas

Galveston TX – When Hurricane Ike slammed into the city of Galveston as a Category 2 storm on September 13, 2008, it pushed a 12-foot storm surge ahead of it, damaging or destroying as many as 70 percent to 80 percent of the residential structures in the city. As residents returned, many found their homes were unlivable. The immediate concern for Galveston's city officials was to get people back in their homes as quickly and safely as possible.



The city's laws apply different requirements for rebuilding of homes in floodprone areas, depending on the amount of damage they received. Before building permits could be issued, determinations needed to be made about the extent of damage.

"My office normally issues an average of 500 residential and commercial repair permits a month," said David Ewald, a 23-year city employee who became the City of Galveston Building Official and Floodplain Manager in 2000. "That's 6,000 permits a year." In contrast, his office issued 14,000 permits in the first four months after Hurricane Ike. "That should tell you with the amount of staff I have, and the tremendous load on us, we just didn't have the time to go out and perform all those inspections," Ewald said.

Ewald's office is responsible for the overall safety and stability of structures within the city. In the specific area of flood safety, he relies on the National Flood Insurance Program, (NFIP) a Federal program that enables people living in participating communities to purchase flood insurance coverage.

To maintain their standing in the NFIP, communities are required to enforce ordinances that regulate building in regulatory floodplains, which are areas that would be inundated in a flood that has a 1-percent chance of occurring in any year, according to engineering studies. These areas are identified as Special Flood Hazard Areas (SFHAs) on Flood Insurance Rate Maps (FIRMs) that are developed by the Federal Emergency Management Agency (FEMA) and adopted by communities that participate in the NFIP.

One responsibility of building officials in participating communities is to determine degrees of structural damage to buildings within regulatory floodplains in their jurisdiction following any type of disaster or damaging event, whether flood related or not. If a building is damaged 50 percent or more of the market value of the structure, it is considered to be "substantially damaged" and the owner is required to bring that structure into compliance with the community's flood damage prevention ordinances. If, on the other hand, the damage is less than 50 percent, the owner may receive permits to rebuild without additional flood safety requirements.

"The problem is, I have three building inspectors, as well as myself, to perform substantial damage determinations," said Ewald. "With a staff that small, and with the size of this disaster, and the number of structures we had to look at, there was no way we could have done it without help."

An aid in expediting the determinations was a free software program that FEMA provides to participating communities called the Residential Substantial Damage Estimator (RSDE). Data collected from a number of categories is entered into the program, which is able to calculate the percentage of damage sustained by individual residential structures. The data is then compiled into databases, putting all the information city officials need to make damage determinations on multiple structures into a manageable format. While a community with a small number of homes that have sustained damage will have an easier time making substantial damage determinations with or without the use of the RSDE software, a city like Galveston following Hurricane Ike, requiring thousands of determinations, sees great use from this program.

The RSDE program provides an easy-to-use and convenient method of calculating and storing damage determination data, but it takes time to actually collect the information. Performing thousands of detailed inspections on every residential structure that sustained any type of damage following an event the size of Hurricane Ike can take an incredible amount of time. As NFIP regulations require these determinations to be completed before repair or rebuild permits can be issued, timing becomes a

major issue to the city officials and homeowners of damaged structures.

Beyond simply providing the RSDE software to communities impacted by Hurricane Ike, FEMA and the State of Texas partnered to initiate a widespread RSDE effort to alleviate much of the work and time involved in making the required damage inspections. FEMA contracted with a private company to bring inspectors to Texas to perform the substantial damage inspections the communities needed to get their permitting processes under way, offering that service, again, at no charge to the communities that requested it.

Although thousands of structures sustained damage from Ike's floodwaters in Galveston, many of them did not require full inspections. To accelerate the permitting process, a team of qualified FEMA floodplain management specialists reviewed entire areas of the city identified by Ewald's office. When it was determined that an area had not suffered significant levels of water, Ewald's office was notified and all residential structures in those areas were approved for permitting. This process eliminated the need to perform full inspections on a large number of homes and allowed those permits to be issued almost immediately.

While the City of Galveston had the largest number of inspections to be completed, 17 communities and counties throughout Southeast Texas received similar assistance from FEMA and the private contractors in performing the RSDE inspections. In total, 12,872 inspections were conducted in communities impacted by Ike in less than three months.

"This was a great program," Ewald said. "FEMA's help allowed us to fulfill our commitments to the NFIP, and to begin getting people back into their homes much faster than if we had to do it without the RSDE. If not for this effort, we'd still be doing inspections today."

Activity/Project Location

Geographical Area: **Single County (County-wide)**

FEMA Region: **Region VI**

State: **Texas**

County: **Galveston County**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding**

Activity/Project Type: **Cooperative Technical Partner Activity**

Structure Type: **Wood Frame**

Activity/Project Start Date: **10/2008**

Activity/Project End Date: **12/2008**

Funding Source: **Hazard Mitigation Technical Assistance Program (HMTAP)**

Funding Recipient: **Local Government**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Non FEMA Cost: **0**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**

Federal Disaster #: **1791 , 09/13/2008**

Federal Disaster Year: **2008**

Value Tested By Disaster? **Unknown**

Repetitive Loss Property? **Unknown**

Reference URLs

No URLs were submitted

Main Points

No Main Points were entered.